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AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Project

Date July 13, 1953

Author Janes C. Evenden

TITLE

ENGELMANN SPRUCE BEETLE SURVEY
LOCHSA RIVER PROJECT
LOLO AND CLEARWATER NATIONAL FORESTS

Forest Insect Laboratory
Coeur d'Alene, Idaho

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FOREST INSECT
LABORATORY

SUBJECT-

INDEX NO.-

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Coeur d'Alene, Idaho

July 13, 1953

ENGELMANN SPRUCE BEETLE SURVEY
LOCHSA RIVER PROJECT
LOLO AND CLEARWATER NATIONAL FORESTS^{1/}
June 1953

During the past winter the uncertainty of the severity and extent of the Engelmann spruce beetle infestation within the Powell Working Circle of the Lolo Forest resulted in considerable attention being given to this area. A large volume of spruce is involved and the only available insect status data came from a few detection and reconnaissance surveys. This information was inadequate to permit definite planning for control action.

To establish certain contentions relative to the status of the infestation in certain portions of this area, a survey was conducted during March. This survey was made with Northern Pacific, Lolo Forest, and Bureau of Entomology personnel. Data obtained, which was secured under adverse field conditions, indicated that the 1952 infestation was more serious and widespread than had been previously anticipated. This information resulted in the dropping of a suggested control operation.

Later in the season plans were developed for the possible removal of this large volume of spruce over an access road system to be conducted this summer. This possibility showed a need for further information concerning the status of the 1952 infestation from all spruce areas of the Lolo and Clearwater Forests, within the Lochsa River drainage. This survey was made by Bureau of Entomology crews, with one forest service officer being assigned to each crew to obtain what additional timber volume data were required. This project was also made under most difficult conditions. Snow conditions made it necessary to make aerial drops of camps and supplies. One crew traveled from camp to camp for four days before reaching its destination. However, this project was started on June 15, and completed by July 1, as planned.

Data obtained from this survey are shown in the following tabulation:

^{1/} Compiled by James C. Evenden, Entomologist in Charge

Fishlake Creek #55 (Clearwater National Forest)

Estimated acreage of susceptible spruce type	11,000
Percent of spruce type covered by survey	1.7
Number of sample acres included in survey	217
Number of spruce trees examined	3,931
Number of infested spruce trees examined	298
Number of infested spruce trees per sample acre	1.6
Percent of spruce trees infested	7.5
Average diameter of green spruce trees	18
Average diameter of infested spruce trees	24
Estimated number of infested trees in area	17,600

Wounded Doe #56 (Clearwater National Forest)

Snow conditions made it impossible to conduct a ground survey of this area. However, Mr. Terrell covered it thoroughly from the air and reports it as being heavily infested.

Monroe Creek #19 (Clearwater National Forest)

Estimated acreage of susceptible spruce type	1,750
Percent of spruce type covered by survey	3.1
Number of sample acres included in survey	54.5
Number of spruce trees examined	629
Number of infested spruce trees examined	54
Number of infested spruce trees per sample acre	1.0
Percent of spruce trees infested	8.6
Average diameter of green trees	16
Average diameter of infested trees	20
Estimated number of infested trees in area	1,750

Indian Grave Creek #88 (Lolo National Forest)

Estimated acreage of susceptible spruce type	3,000
Percent of spruce type covered by survey	2.6
Number of sample acres included in survey	77
Number of spruce trees examined	721
Number of infested spruce trees examined	12
Number of infested spruce trees per sample acre	.15
Percent of spruce trees infested	1.6
Average diameter of green spruce trees	19
Average diameter of infested spruce trees	22
Estimated number of infested trees in area	450

Infestation in this area is concentrated along the creek bottom where several groups of infested trees were observed.

Gravey Creek #20 (Lolo National Forest)

Estimated acreage of susceptible spruce type	10,180
Percent of spruce type covered by survey	2.3
Number of sample acres included in survey	234
Number of spruce trees examined	3,086
Number of infested spruce trees	265
Number of infested spruce trees per sample acre	1.1
Percent of spruce trees infested	8.6
Average diameter of green trees	18
Average diameter of infested trees	20
Estimated number of infested trees in area	11,200

Post Office Creek #87 (Lolo National Forest)

Estimated acreage of susceptible spruce type	2,450
Percent of spruce type covered by survey	2.8
Number of sample acres included in survey	68
Number of spruce trees examined	11
Number of infested spruce trees examined	0
Average diameter of green trees	16

Moon Creek Part of #21 (Lolo National Forest)

Estimated acreage of susceptible spruce type	1,200
Percent of spruce type covered by survey	2.6
Number of sample acres included in survey	31
Number of spruce trees examined	561
Number of infested spruce trees examined	9
Number of infested trees per sample acre	.3
Percent of spruce trees infested	1.7
Average diameter of green trees	16
Average diameter of infested trees	18
Estimated number of infested trees in area	360

Cayuse Creek #21 (Clearwater National Forest) (Administered by Lolo National Forest)

Estimated acreage of susceptible spruce type	4,000
Percent of spruce type covered by survey	2.8
Number of sample acres included in survey	44.5
Number of spruce trees examined	924
Number of infested spruce trees	57
Number of infested trees per sample acre	1.06
Percent of spruce trees infested	5.2
Average diameter of green spruce trees	16
Average diameter of infested spruce trees	24
Estimated number of infested trees in area	

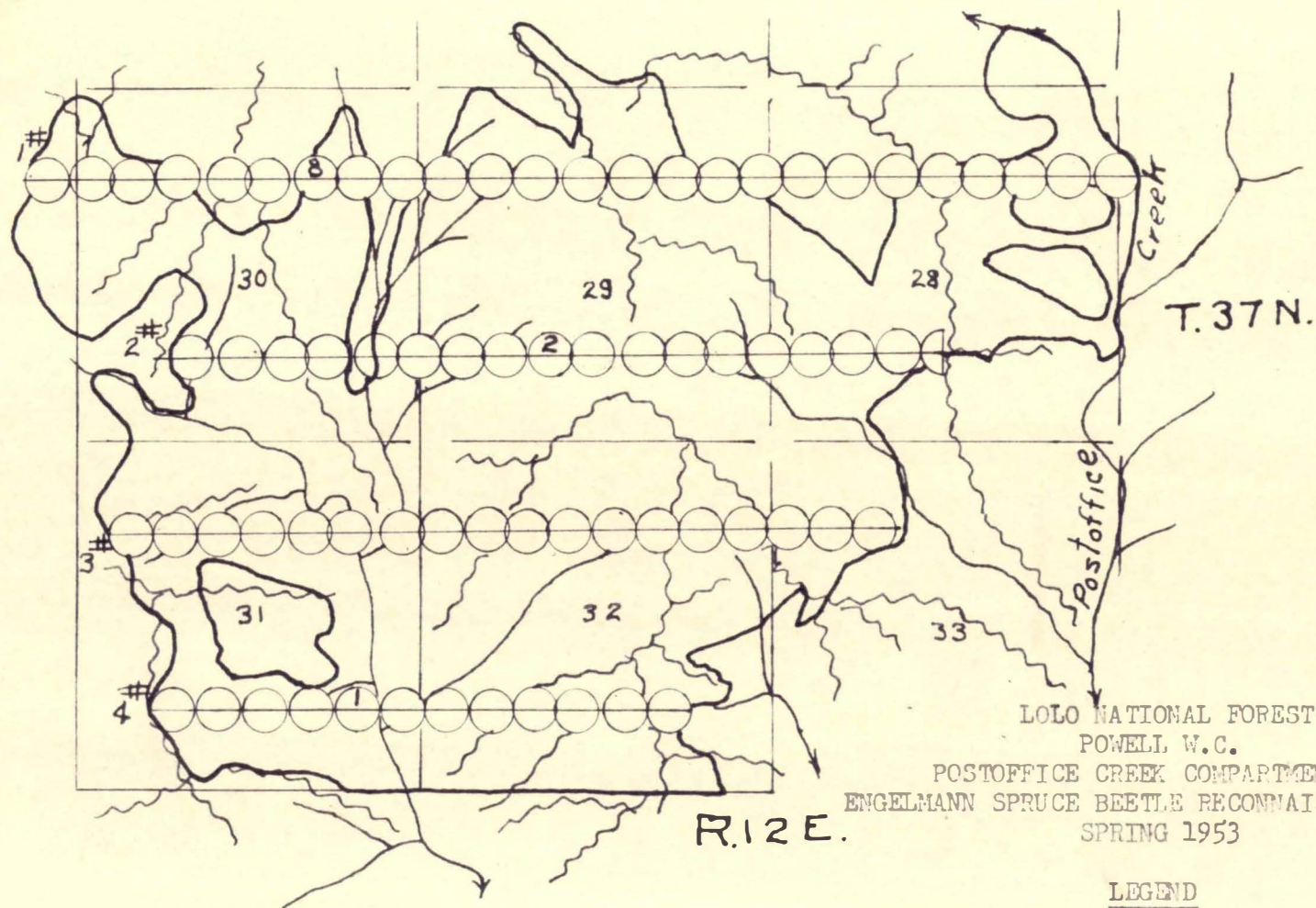
Squaw Creek #85 (Lolo National Forest)

Estimated acreage of susceptible spruce type	250
Percent of spruce type covered by survey	4
Number of sample acres included in survey	10
Number of spruce trees examined	231
Number of infested spruce trees examined	25
Number of infested trees per sample acre	2.5
Percent of spruce trees infested	10.8
Average diameter of infested trees	22
Average diameter of green trees	15
Estimated number of infested trees in area	625

The following data are presented with little comment or recommendations. Some of the situations are serious, while others are not. It is believed that these data serve the purpose for which they were intended, and rather definitely show that the 1952 infestation is more serious and more widespread than previously considered.

In addition to the ground surveys which provided rather positive data, Mr. Terrell covered other areas with an intensive aerial reconnaissance. The Wounded Doe situation has already been mentioned. In addition the Wilderness area of the Lolo, west of the Elk Summit Road is infested throughout all spruce types. This infestation varies from light to very heavy. There are a few spots of infested trees along the east side of the Elk Summit road in Big Sand Creek. Mr. Terrell also reported by his aerial survey an area of some 900 acres of spruce west of Grave Butte in Lost Creek, that is heavily infested.

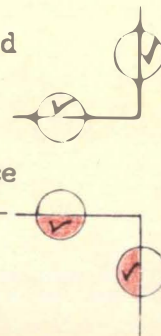
It is difficult to offer recommendations for these areas until such time as the action program has been definitely settled. At that time the infestation in each area can be evaluated in relation to the overall action program.

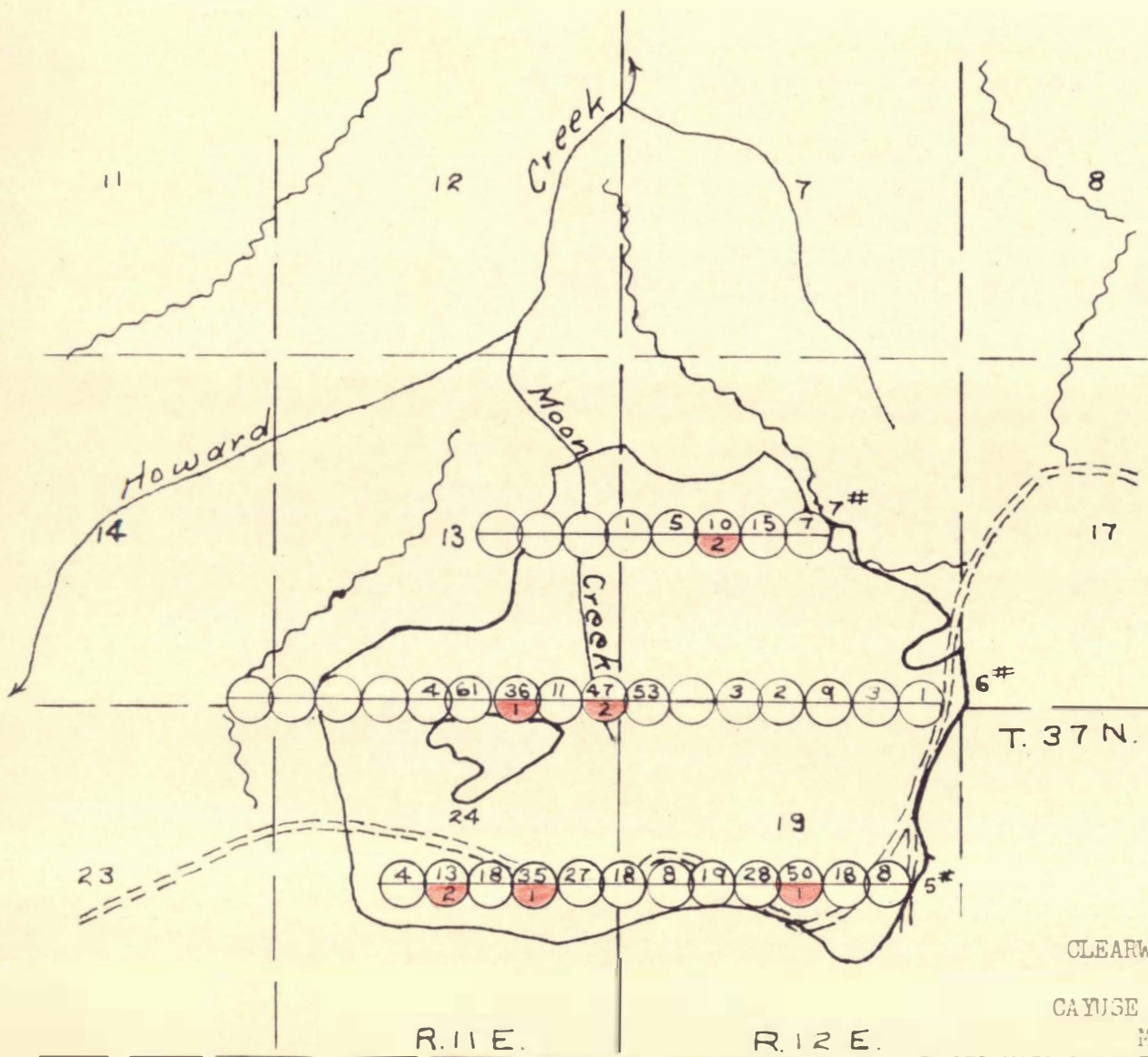


LEGEND

Location of strip lines and
location of green spruce
counted on strips — — — —

Location of infested spruce
counted on strips — — — —





LEGEND

Location of strip lines and location of green spruce counted on strips -----

Location of infested spruce counted on strips -----

CLEARWATER NATIONAL FOREST

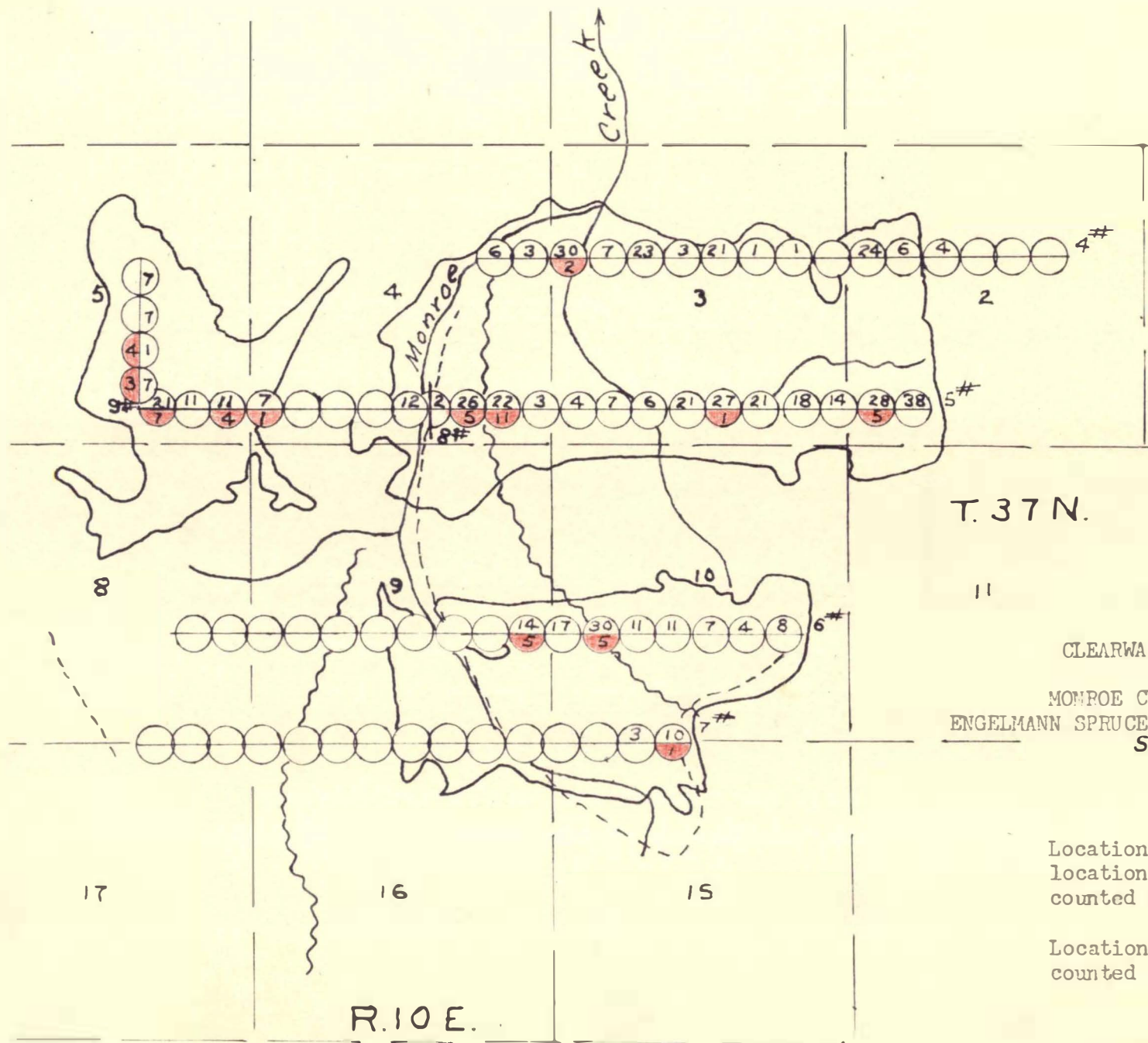
KELLY W.C.

CAYUSE CREEK COMPARTMENT #21

MOON CREEK UNIT

ENGELMANN SPRUCE BEETLE RECONNAISSANCE SURVEY

SPRING 1953



T. 37 N.

11

CLEARWATER NATIONAL FOREST
 KELLY W.C.
 MONROE CREEK COMPARTMENT #19
 ENGELMANN SPRUCE BEETLE RECONNAISSANCE SURV.
 SPRING 1953

LEGEND

Location of strip lines and
 location of green spruce
 counted on strips — — — —

Location of infested spruce
 counted on strips — — — —

LOLO NATIONAL FOREST

POWELL W.C.

INDIAN GRAVE CR. COMPARTMENT #88

ENGELMANN SPRUCE BEETLE RECONNAISSANCE SURVEY

SPRING 1953

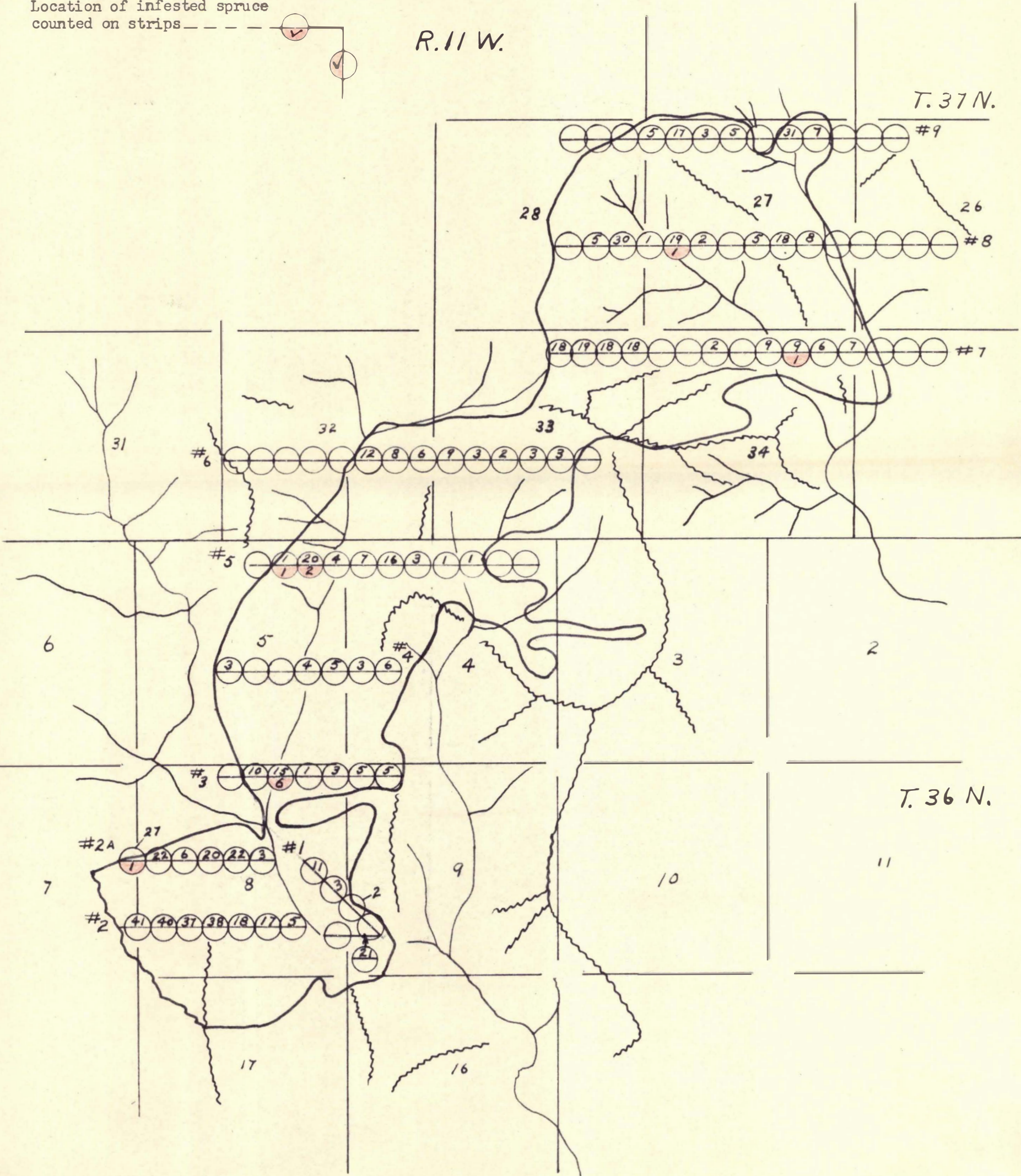
LEGEND

Location of strip lines and
location of green spruce
counted on strips — — — — —

Location of infested spruce
counted on strips — — — — —

R. 11 W.

T. 37 N.

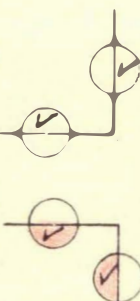


CLEARWATER NATIONAL FOREST
KELLY W.C.
CAYUSE CREEK COMPARTMENT #21
ENGELMANN SPRUCE BEETLE RECONNAISSANCE SURVEY
SPRING 1953

LEGEND

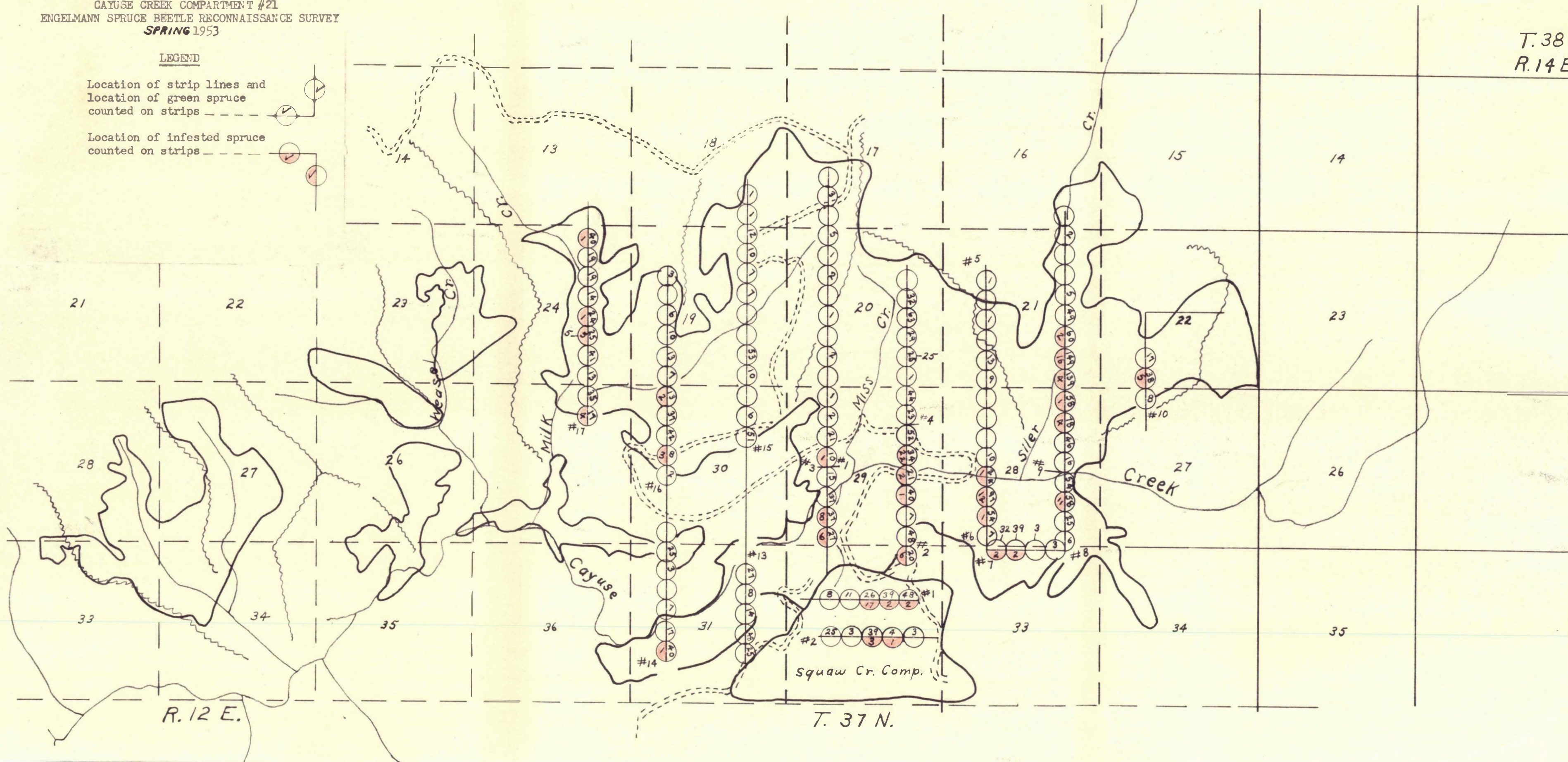
Location of strip lines and
location of green spruce
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Location of infested spruce
counted on strips

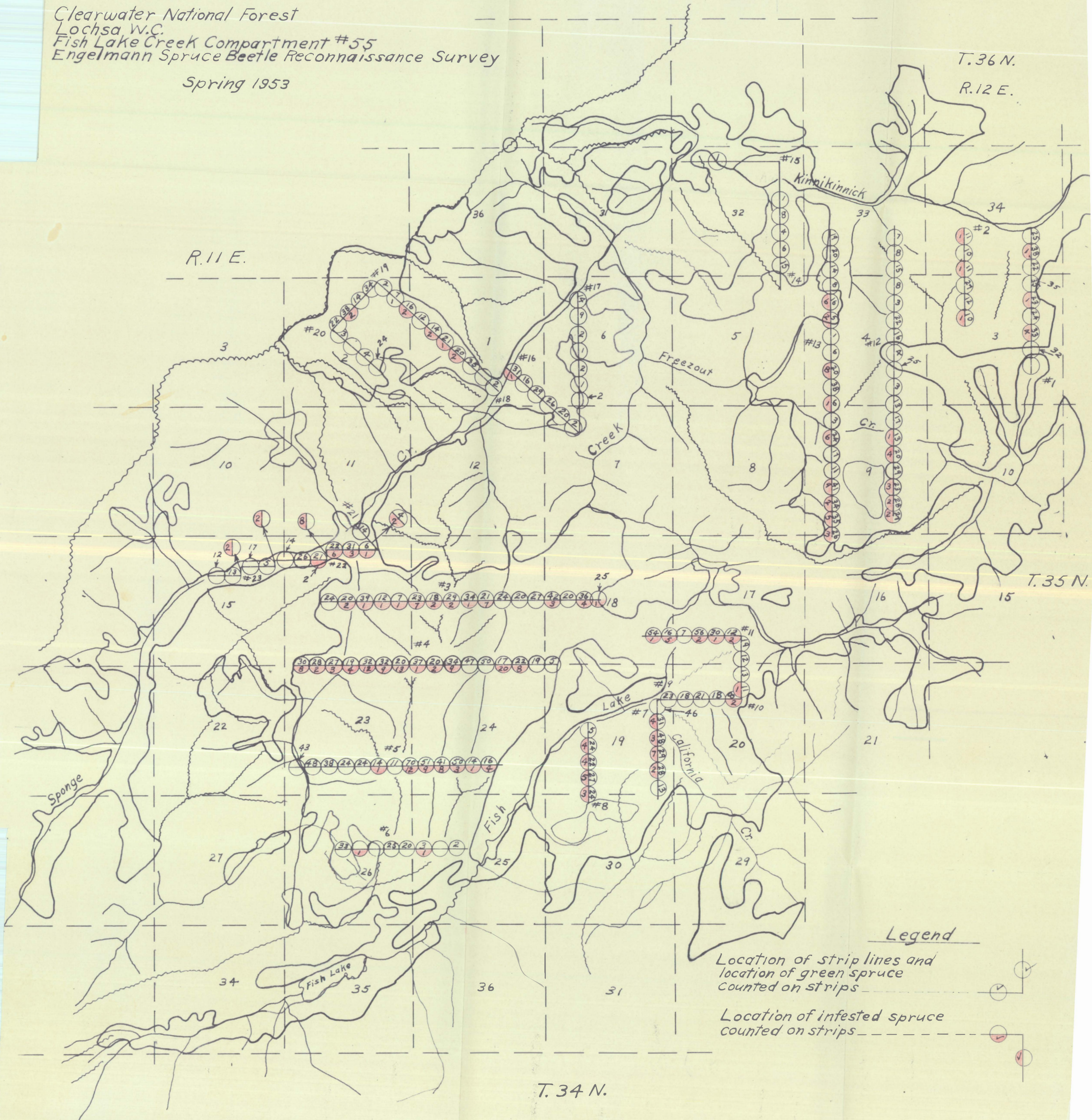


R. 13 E.

T. 38 N.
R. 14 E.



Clearwater National Forest
 Lochsa W.C.
 Fish Lake Creek Compartment #55
 Engelmann Spruce Beetle Reconnaissance Survey
 Spring 1953



CLEARWATER NATIONAL FOREST
 KELLY W.C.
 GRAVEY CREEK COMPARTMENT #20
 ENGELMANN SPRUCE BEETLE RECONNAISSANCE SURVEY
 SPRING 1953

LEGEND

Location of strip lines and
 location of green spruce
 counted on strips

Location of infested spruce
 counted on strips

